



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,214	05/05/2006	Shinji Imoto	2271/75688	6004
23432 7590 07/26/2007 COOPER & DUNHAM, LLP 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036			EXAMINER DUBNOW, JOSHUA M	
			ART UNIT 2861	PAPER NUMBER
			MAIL DATE 07/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,214

Applicant(s)

IMOTO ET AL.

Examiner

Joshua M. Dubnow

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with a resistive value of the recording medium.

Group II, claim(s) 10-14, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with a result of detection of a relative position between the recording medium and the charges applied to the conveyance belt.

Group III, claim(s) 15-20, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with a size of the droplets of the recording liquid discharged from the recording head.

Group IV, claim(s) 21-26, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with a viscosity of the droplets of the recording liquid discharged from the recording head.

Group V, claim(s) 27-31, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with at least two items.

Group VI, claim(s) 32-38, drawn to an image forming apparatus that adjusts the amount of electric charges on the surface of a recording medium in accordance with a resistance value of the recording medium and a fact as to whether an image is being formed on the first or second surface to be printed.

2. The inventions listed as Groups I, II, III, IV, V, and VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they

Art Unit: 2861

lack the same or corresponding special technical features for the following reasons: The groups listed above are not within the permitted combination of different categories of inventions. That is six apparatuses. As set forth in PCT/JP05/08651, there is no special technical feature that defines a contribution over the prior art. JP2001-31278 and JP2004-99280 define common technical features.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- A. The embodiment of Figure 1.
- B. The embodiment of Figure 16.
- C. The embodiment of Figure 19.
- D. The embodiment of Figure 27.
- E. The embodiment of Figure 28.
- F. The embodiment of Figure 31.
- G. The embodiment of Figure 34.
- H. The embodiment of Figure 35.
- I. The embodiment of Figure 36.
- J. The embodiment of Figure 38.
- H. The embodiment of Figure 41.
- K. The embodiment of Figure 42.

4. Upon election of Group I, II, IV, V, or VI, the applicant is further required to elect one of the following disclosed species. These species are deemed to lack unity of

invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- a. Wherein the amount of electric charges on the surface of the recording medium is adjusted in accordance with a result of detection of a surface resistance of the recording medium.
- b. Wherein the amount of electric charges on the surface of the recording medium is adjusted in accordance with a result of detection of a volume resistance of the recording medium.
- c. Wherein the amount of electric charges on the surface of the recording medium is adjusted in accordance with a result of detection of environment temperature and humidity.
- d. Wherein the amount of electric charges on the surface of the recording medium is adjusted in accordance with externally given information regarding the resistance value of the recording medium.
- e. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling a charge period length of applied charges.
- f. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling an alternating voltage.

Art Unit: 2861

- g. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling a timing of applying electric charges.
- h. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling at least one of a conveyance speed and a stop time of the conveyance belt.

5. Upon election of Group III, the applicant is further required to elect one of the following disclosed species. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- i. Wherein the amount of electric charges on the surface of the recording medium is adjusted in accordance with externally given information regarding a size of the droplets of the recording liquid.
- ii. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling a charge period length applied by the charger to the conveyance belt.
- iii. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling an alternating voltage.

- iv. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling a timing of applying electric charges.
- v. Wherein the amount of electric charges on the surface of the recording medium is adjusted by controlling at least one of a conveyance speed and a stop time of the conveyance belt.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: As set forth in PCT/JP05/08651, there is no special technical feature that defines a contribution over the prior art.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

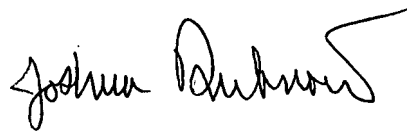
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua M. Dubnow whose telephone number is 571-270-1337. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MATTHEW LUU
SUPERVISORY PATENT EXAMINER



Joshua M Dubnow
Examiner
Art Unit 2861

July 16, 2007